

## SEQUENCE LISTING

&lt;110&gt; Bujard, Hermann

&lt;120&gt; Method for producing recombinants

intended for use in a complete Malaria antigen GP190/MSP1

&lt;130&gt; GRUE-003

&lt;140&gt; 09/269,874

&lt;141&gt; 1999-08-02

&lt;150&gt; PCT/EP97/05441

&lt;151&gt; 1997-10-02

&lt;150&gt; DE 19640817.2

&lt;151&gt; 1996-10-02

&lt;160&gt; 3

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 4920

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 1

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BI  
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&lt;211&gt; 4940

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 2

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&lt;210&gt; 3

&lt;211&gt; 1639

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 3

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 50 55 60  
 Ser Thr Pro Gly Ser Lys Gly Ser Val Ala Ser Gly Gly Ser Gly Gly  
 65 70 75 80  
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 85 90 95  
 Gly Gly Ser Val Ala Ser Gly Gly Ser Gly Asn Ser Arg Arg Thr Asn  
 100 105 110  
 Pro Ser Asp Asn Ser Ser Asp Scr Asp Ala Lys Ser Tyr Ala Asp Leu  
 115 120 125  
 Lys His Arg Val Arg Asn Tyr Leu Leu Thr Ile Lys Glu Leu Lys Tyr  
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 Pro Gln Leu Phe Asp Leu Thr Asn His Met Leu Thr Leu Cys Asp Asn  
 145 150 155 160

Ile His Gly Phe Lys Tyr Leu Ile Asp Gly Tyr Glu Glu Ile Asn Glu  
 165 170 175  
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 225 230 235 240  
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 Lys Lys Ile Glu Ser Asp Lys Lys Ser Tyr Glu Asp Arg Ser Lys Ser  
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 485 490 495  
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 Met Gly Lys Arg Tyr Ser Tyr Lys Val Glu Lys Leu Thr His His Asn  
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 Thr Phe Ala Ser Tyr Glu Asn Ser Lys His Asn Leu Glu Lys Leu Thr  
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 Asn Lys Tyr Lys Leu Lys Leu Glu Arg Leu Phe Asp Lys Lys Lys Thr  
 1010 1015 1020  
 Val Gly Lys Tyr Lys Met Gln Ile Lys Lys Leu Thr Leu Leu Lys Glu  
 1025 1030 1035 1040  
 Gln Leu Glu Ser Lys Leu Asn Ser Leu Asn Asn Pro Lys His Val Leu  
 1045 1050 1055  
 Gln Asn Phe Ser Val Phe Phe Asn Lys Lys Lys Glu Ala Glu Ile Ala  
 1060 1065 1070  
 Glu Thr Glu Asn Thr Leu Glu Asn Thr Lys Ile Leu Leu Lys His Tyr  
 1075 1080 1085

Lys Gly Leu Val Lys Tyr Tyr Asn Gly Glu Ser Ser Pro Leu Lys Thr  
 1090 1095 1100  
 Leu Ser Glu Glu Ser Ile Gln Thr Glu Asp Asn Tyr Ala Ser Leu Glu  
 1105 1110 1115 1120  
 Asn Phe Lys Val Leu Ser Lys Leu Glu Gly Lys Leu Lys Asp Asn Leu  
 1125 1130 1135  
 Asn Leu Glu Lys Lys Lys Leu Ser Tyr Leu Ser Ser Gly Leu His His  
 1140 1145 1150  
 Leu Ile Ala Glu Leu Lys Glu Val Ile Lys Asn Lys Asn Tyr Thr Gly  
 1155 1160 1165  
 Asn Ser Pro Ser Glu Asn Asn Thr Asp Val Asn Asn Ala Leu Glu Ser  
 1170 1175 1180  
 Tyr Lys Lys Phe Leu Pro Glu Gly Thr Asp Val Ala Thr Val Val Ser  
 1185 1190 1195 1200  
 Glu Ser Gly Ser Asp Thr Leu Glu Gln Ser Gln Pro Lys Lys Pro Ala  
 1205 1210 1215  
 Ser Thr His Val Gly Ala Glu Ser Asn Thr Ile Thr Thr Ser Gln Asn  
 1220 1225 1230  
 Val Asp Asp Glu Val Asp Asp Val Ile Ile Val Pro Ile Phe Gly Glu  
 1235 1240 1245  
 Ser Glu Glu Asp Tyr Asp Asp Leu Gly Gln Val Val Thr Gly Glu Ala  
 1250 1255 1260  
 Val Thr Pro Ser Val Ile Asp Asn Ile Leu Ser Lys Ile Glu Asn Glu  
 1265 1270 1275 1280  
 Tyr Glu Val Leu Tyr Leu Lys Pro Leu Ala Gly Val Tyr Arg Ser Leu  
 1285 1290 1295  
 Lys Lys Gln Leu Glu Asn Asn Val Met Thr Phe Asn Val Asn Val Lys  
 1300 1305 1310  
 Asp Ile Leu Asn Ser Arg Phe Asn Lys Arg Glu Asn Phe Lys Asn Val  
 1315 1320 1325  
 Leu Glu Ser Asp Leu Ile Pro Tyr Lys Asp Leu Thr Ser Ser Asn Tyr  
 1330 1335 1340  
 Val Val Lys Asp Pro Tyr Lys Phe Leu Asn Lys Glu Lys Arg Asp Lys  
 1345 1350 1355 1360  
 Phe Leu Ser Ser Tyr Asn Tyr Ile Lys Asp Ser Ile Asp Thr Asp Ile  
 1365 1370 1375  
 Asn Phe Ala Asn Asp Val Leu Gly Tyr Tyr Lys Ile Leu Ser Glu Lys  
 1380 1385 1390  
 Tyr Lys Ser Asp Leu Asp Ser Ile Lys Lys Tyr Ile Asn Asp Lys Gln  
 1395 1400 1405  
 Gly Glu Asn Glu Lys Tyr Leu Pro Phe Leu Asn Asn Ile Glu Thr Leu  
 1410 1415 1420  
 Tyr Lys Thr Val Asn Asp Lys Ile Asp Leu Phe Val Ile His Leu Glu  
 1425 1430 1435 1440  
 Ala Lys Val Leu Asn Tyr Thr Tyr Glu Lys Ser Asn Val Glu Val Lys  
 1445 1450 1455  
 Ile Lys Glu Leu Asn Tyr Leu Lys Thr Ile Gln Asp Lys Leu Ala Asp  
 1460 1465 1470  
 Phe Lys Lys Asn Asn Asn Phe Val Gly Ile Ala Asp Leu Ser Thr Asp  
 1475 1480 1485  
 Tyr Asn His Asn Asn Leu Leu Thr Lys Phe Leu Ser Thr Gly Met Val  
 1490 1495 1500  
 Phe Glu Asn Leu Ala Lys Thr Val Leu Ser Asn Leu Leu Asp Gly Asn  
 1505 1510 1515 1520  
 Leu Gln Gly Met Leu Asn Ile Ser Gln His Gln Cys Val Lys Lys Gln  
 1525 1530 1535  
 Cys Pro Gln Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu  
 1540 1545 1550

*Bi  
Cons*

Cys	Lys	Cys	Leu	Leu	Asn	Tyr	Lys	Gln	Glu	Gly	Asp	Lys	Cys	Val	Glu	
	1555						1560					1565				
Asn	Pro	Asn	Pro	Thr	Cys	Asn	Glu	Asn	Asn	Gly	Gly	Cys	Asp	Ala	Asp	
	1570					1575					1580					
Ala	Lys	Cys	Thr	Glu	Glu	Asp	Ser	Gly	Ser	Asn	Gly	Lys	Lys	Ile	Thr	
	1585				1590					1595					1600	
Cys	Glu	Cys	Thr	Lys	Pro	Asp	Ser	Tyr	Pro	Leu	Phe	Asp	Gly	Ile	Phe	
				1605				1610					1615			
Cys	Ser	Ser	Ser	Asn	Phe	Leu	Gly	Ile	Ser	Phe	Leu	Leu	Ile	Leu	Met	
				1620				1625					1630			
Leu	Ile	Leu	Tyr	Ser	Phe	Ile										
				1635												

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